

(U.S. Patent No. 4,853,565, hereinafter Elton '565); Claim 36 was rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Balke and Elton '565 and further in view of Takaoka et al. (U.S. Patent No. 5,094,703, hereinafter Takaoka); Claims 38 and 40 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Balke and Elton '565 and further in view of Elton et al. (U.S. Patent No. 4,622,116, hereinafter Elton '116); Claims 39 and 46 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Balke, Elton '565 and Haxton (U.S. Patent No. 5,902,958); and Claims 31-33 were indicated as containing allowable subject matter.

Applicants appreciatively acknowledge the indication of allowable subject matter.

Independent Claim 25 is directed to a rotating electric machine having a stator with a plurality slots, and a winding of a high-voltage cable drawn through the slots. At least one of the slots includes a cuff between the high-voltage cable and an inside surface of the slot at an end surface of the stator. The cuff is configured to extend axially from the end surface of the stator into the slot.

Claims 25-30, 34, and 43-45 were rejected based upon a hypothetical machine having a stator and a stator winding according to the machine in Shildneck, and an insulating assembly for the stator slots according to Balke. Applicants maintain their traversal of this rejection for reasons similar to those set forth in the Amendment filed July 12, 2001 regarding a combination of Shildneck and Aimar. All of the arguments supporting Applicants' traversal of the rejections set forth in the Amendment filed July 12, 2001 are incorporated herein by reference.

In the outstanding Office Action, Balke is asserted for its teaching of providing an insulating assembly for the stator slots including a slot liner made of a resilient insulating material. However, Balke does not teach or suggest what is also lacking in Shildneck as set forth in the Amendment filed July 12, 2001, namely, having a high-voltage cable as a stator

winding that is drawn through the slots of the stator. Furthermore, there is nothing in Balke suggesting a desirability for using a high-voltage cable as a stator winding.

Consequently, it is respectfully submitted that no matter how Shildneck is combined with Balke, the proposed combination fails to teach or suggest the invention defined by independent Claims 25 and 43, or Claims 26-30, 34, and 44-46, dependent therefrom.

Elton '565 is asserted in the rejection of Claims 35, 37, 41, and 42 in addition to the combination of Shildneck and Balke for its teaching of a cable having stranded conductors surrounded by a first inner semiconducting insulating layer, an intermediate solid insulation layer, and an outer semiconducting insulation layer connected to ground. However, as described in detail in the Amendment filed July 12, 2001, Elton '565 does not teach or suggest what is also lacking in Shildneck and Balke, namely, having a high-voltage cable as a stator winding that is drawn through the slots of the stator. Furthermore, there is nothing in Elton '565 suggesting a desirability for using a high-voltage cable as a stator winding.

Consequently, it is respectfully submitted that no matter how Shildneck is combined with Balke and Elton '565, the proposed combination fails to teach or suggest the invention defined by independent Claim 25, or Claims 35, 37, 41, and 42, dependent therefrom.

Takaoka is asserted in the rejection of Claim 36 in addition to the combination of Shildneck and Balke for its teaching of selecting a particular diameter of the conductor based on the amount of power that is to be transmitted. Aside from the conductor diameter, there is nothing in Takaoka that would cure the above-described deficiencies regarding the proposed combination of Shildneck, Balke, and Elton '565. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Balke, Elton '565, and Takaoka, the proposed combination fails to teach or suggest the invention defined by independent Claims 25, or Claim 36, dependent therefrom.

Elton '116 is asserted in the rejection of Claims 38 and 40 in addition to the combination of Shildneck and Balke for its teaching of forming different overlapping layers of insulation with the same coefficient of thermal expansion in order to prevent thermal stress that would lead to the materials cracking and separating causing a failure in the insulation. Aside from the coefficient of thermal expansion, there is nothing in Elton '116 that would cure the above-described deficiencies regarding the proposed combination of Shildneck, Balke, and Elton '565. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Balke, Elton '565, and Elton '116, the proposed combination fails to teach or suggest that invention defined by independent Claims 25, or Claims 38 and 40, dependent therefrom.

Haxton is asserted in the rejection of Claims 39 and 46 in addition to the combination of Shildneck and Balke for its teaching of using a material for the layers of a cable having a modulus of elasticity of less than 500 MPa. Aside from the modulus of elasticity, there is nothing in Haxton that would cure the above-described deficiencies regarding the proposed combination of Shildneck, Balke, and Elton '565. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Balke, Elton '565, and Haxton, the proposed combination fails to teach or suggest the invention defined by independent Claim 25, or Claims 39 and 46, dependent therefrom.

In the Response to Arguments section of the outstanding Office Action, Examiner rebuts Applicants' argument that Shildneck is not directed to a high-voltage machine. The Office Action asserts that because Shildneck discusses the advantages and disadvantages of using rectangular cross-section conductor bars as windings for conventional large capacity turbine-generators, and because it is known that conventional high-voltage generators use rectangular conductor bars, the machine Shildneck must be a high-voltage machine.¹

¹ See Office Action dated October 15, 2001, at numbered paragraph 9, pp. 6-7.

Applicants' respectfully traverse this line of reasoning. It is respectfully submitted that Shildneck merely describes the disadvantages of rectangular bar-type windings (which would be used for conventional-voltage generators as well as high-voltage generators) in order to provide a backdrop for describing the advantages of using the cable winding described therein. The outstanding Office Action recognizes that Shildneck does not specify the operating voltage range for the generator.² In the Amendment filed July 12, 2001, Applicants provided substantial evidence as to why the machine described in Shildneck would not be operable at high voltages. The Examiner has provided no evidence as to why Shildneck "clearly teaches his generator is designed for high voltage application."³

In a further rebuttal, it is asserted in the outstanding Office Action that "the rigidity of a conductor cable primarily depends on the type of insulation used."⁴ Common sense dictates that this cannot be the case. A multi-layer cable will naturally be as rigid as the most rigid layer, whether that layer is the insulation layer, a semiconducting layer, or the conductor itself. Moreover, the outstanding Office Action has not provided any evidence showing a teaching or motivation to combine the asserted prior art references.

In the recent CAFC decision of *In re Lee*, 61 USPQ2d 1430 (CAFC 2002), the court stressed the requirement for basing obviousness rejections on evidence, and not on conclusory statements made by an Examiner to support a rejection:

When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness.⁵

...In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the Examiner and the Board are presumed to act from [the viewpoint of "the person

² *Id.*

³ *Id.*

⁴ *Id.*, at p. 8.

⁵ *In re Lee*, 61 USPQ2d 1430, 1433 (CAFC 2002).

having ordinary skill in the art to which said subject matter pertains"]. Thus, when they rely on what they assert to be general knowledge to negate patentability, the knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.⁶

It is respectfully submitted that the rejections set forth in the outstanding Office Action are based on conclusory statements, and not based on evidence as is required to be consistent with the guidance set forth in *In re Lee*.

Consequently, in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 25-46 is patentably distinguishing over the asserted prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is respectfully requested.

Respectfully submitted,
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⁶ *Id.* at 1435